



Final

**Final Standards – Standards of Practice
for Recognizing Events in Work
(red-lined)**

Actuarial Standards Board

September 2011

Document 211091

*Ce document est disponible en français
© 2011 Canadian Institute of Actuaries*

1100 INTRODUCTION

1110 DEFINITIONS

- .01 Each term set over dotted underlining has the meaning given in this section and has its ordinary meaning otherwise (e.g., external user).
- .02 Accepted actuarial practice is the manner of performing work in Canada in accordance with the Rules and these Standards of Practice. Standards of Practice are the responsibility of the Actuarial Standards Board and approval of standards and changes to standards is made through a process that involves consultation with the actuarial profession and other interested parties. Unless the context requires otherwise, references to accepted actuarial practice refer to accepted actuarial practice for work in Canada. [*pratique actuarielle reconnue*]
- .03 Actuarial cost method is a method to allocate the present value of a plan's obligations to time periods, usually in the form of a service cost and an accrued liability. [*méthode d'évaluation actuarielle*]
- .04 Actuarial present value method is a method to calculate the lump sum equivalent at a specified date of amounts payable or receivable at other dates as the aggregate of the present values of each of those amounts at the specified date, and taking into account both the time value of money and contingent events. [*méthode de la valeur actuarielle*]
- .04.1 Actuary, as it is used in these standards, means anyone bound by these standards for work in Canada. [*actuaire*]
- .05 Anti-selection is the tendency of one party in a relationship to exercise options to the detriment of another party when it is to the first party's advantage to do so. [*antisélection*]
- .06 Appointed actuary of an entity is an actuary formally appointed, pursuant to legislation, by the entity to monitor the financial condition of that entity. [*actuaire désigné*]
- .07 Appropriate engagement is one that does not impair the actuary's ability to conform to the rules. [*mandat approprié*]
- .08 Benefits liabilities are the liabilities of a plan in respect of claims incurred on or before a calculation date. [*obligations liées aux prestations*]
- .09 Best estimate means without bias, neither conservative nor unconservative. [*meilleure estimation*]
- .09.1 Bylaws means the bylaws of the Canadian Institute of Actuaries, as amended from time to time. [*Statuts administratifs*]
- .10 Calculation date is the effective date of a calculation; e.g., the balance sheet date in the case of a valuation for financial statements. It usually differs from the report date. [*date de calcul*]
- .11 Case estimate at a calculation date is the unpaid amount of one of, or a group of, an insurer's reported claims (perhaps including the amount of claim adjustment expenses), as estimated by a claims professional according to the information available at that date. [*évaluation du dossier*]
- .12 Claim adjustment expenses are internal and external expenses in connection with settlement of claims. [*frais de règlement des sinistres*]

- .13 Claim liabilities are the portion of insurance contract liabilities in respect of claims incurred on or before the balance sheet date. [*passif des sinistres*]
- .14 Contingent event is an event which may or may not happen, or which may happen in more than one way or which may happen at different times. [*éventualité*]
- .15 Contribution is a contribution by a participating employer or a plan member to fund a benefits plan. [*cotisation*]
- .16 Definitive means permanent and final. [*décision définitive*]
- .17 Development of data with respect to a given coverage period is the change in the value of those data from one calculation date to a later date. [*matérialisation*]
- .18 Domain of actuarial practice is the measurement of the current financial implications of future contingent events. [*domaine de la pratique actuarielle*]
- .19 Early implementation means the implementation of new standards before their effective date. [*mise en œuvre anticipée*]
- .20 Earnings-related benefit is a benefit whose amount depends on the recipient's earnings. [*régime salaire de carrière*]
- .21 External user is a user who is not an internal user. [*utilisateur externe*]
- .22 External user report is a report whose users include an external user. [*rapport destiné à un utilisateur externe*]
- .23 Financial condition of an entity at a date is its prospective ability at that date to meet its future obligations, especially obligations to policy owners, members, and those to whom it owes benefits. Financial condition is sometimes called “future financial condition”. [*santé financière*]
- .24 Financial position of an entity at a date is its financial state as reflected by the amount, nature, and composition of its assets, liabilities, and equity at that date. [*situation financière*]
- .25 To fund a plan is to dedicate assets to its future benefits and expenses. Similarly for “funded” and “funding”. [*provisionner*]
- .25.1 Funded status is the difference between the value of assets and the actuarial present value of benefits allocated to periods up to the calculation date by the actuarial cost method, based on a valuation of a pension plan. [*niveau de provisionnement*]
- .26 Going concern valuation is a valuation which assumes that the entity to which the valuation applies continues indefinitely beyond the calculation date. [*évaluation en continuité*]
- .27 Indexed benefit is a benefit whose amount depends on the movement of an index like the Consumer Price Index. [*prestation indexée*]

- .27.1 Insurance contract is a contract under which one party (the insurer) accepts significant insurance risk from another party (the policyholder) by agreeing to compensate the policyholder if a specified uncertain future event (the insured event) adversely affects the policyholder. Insurance contract includes group insurance, third party contracts where the owner of the contract and the person who is compensated (the policyholder) differ, and all like arrangements substantively in the nature of insurance.¹ [*contrat d'assurance*]
- .27.2 Insurance contract liabilities in an insurer's balance sheet are the liabilities at the balance sheet date on account of the insurer's insurance contracts, including commitments, which are in force at that date or which were in force before that date. [*passif des contrats d'assurance*]
- .28 Insurer is the party that has an obligation under an insurance contract to compensate a policyholder if an insured event occurs. Insurer includes a fraternal benefit society and the Canadian branch of a foreign insurer, but does not include a public personal injury compensation plan.¹ [*assureur*]
- .29 Internal user is the actuary's client or employer. Internal user and external user are mutually exclusive. [*utilisateur interne*]
- .30 Internal user report is a report all of whose users are internal users. [*rapport destiné à un utilisateur interne*]
- .31 Margin for adverse deviations is the difference between the assumption for a calculation and the corresponding best estimate assumption. [*marge pour écarts défavorables*]
- .32 New standards means new standards, or amendment or rescission of existing standards. [*nouvelles normes*]
- .33 Periodic report is a report that is repeated at regular intervals. [*rapport périodique*]
- .34 Plan Administrator is the person or entity with overall responsibility for the operation of a benefit plan. [*administrateur d'un régime*]
- .35 Policy liabilities in an insurer's balance sheet are the liabilities at the balance sheet date on account of the insurer's policies, including commitments, which are in force at that date or which were in force before that date. Policy liabilities consist of insurance contract liabilities and liabilities for policy contracts other than insurance contracts. [*passif des polices*]
- .35.1 Policyholder is a party that has a right to compensation under an insurance contract if an insured event occurs.² [*titulaire de police*]

¹ The wording of the first sentence of this definition is identical to the corresponding definition appearing in IFRS 4 Appendix A, as of November 2009. The second sentence is explanatory and not part of that definition.

² The wording of this definition is identical to the corresponding definition appearing in IFRS 4 Appendix A, as of November 2009.

- .36 Practice committee means the committee or committees of the Canadian Institute of Actuaries, either standing or ad hoc, to which the Practice Council of the Canadian Institute of Actuaries has assigned responsibility for the practice area or areas to which particular Standards of Practice apply. [*commission de pratique*]
- .37 Premium liabilities are the portions of insurance contract liabilities that are not claim liabilities. [*passif des primes*]
- .38 Prescribed means prescribed by these standards. [*prescrit*]
- .39 Provision for adverse deviations is the difference between the actual result of a calculation and the corresponding result using best estimate assumptions. [*provision pour écarts défavorables*]
- .40 Public personal injury compensation plan means a public plan
whose primary purpose is to provide benefits and compensation for personal injuries,
whose mandate may include health and safety objectives and other objectives ancillary to the provision of benefits and compensation for personal injuries, and
that has no other substantive commitments.
- The benefits and compensation provided under such public plans are defined by statute. In addition, such public plans have monopoly powers, require compulsory coverage except for those groups excepted by legislation or regulation, and have the authority to set assessment rates or premiums. [*régime public d'assurance pour préjudices corporels*]
- .41 Recommendation means an italicized recommendation in these standards. Similarly for “recommend”. [*recommandation*]
- .42 Report is an actuary's oral or written communication to users about his or her work. Similarly for “to report”. [*rapport*]
- .43 Report date is the date on which the actuary completes the report on his or her work. It usually differs from the calculation date. [*date du rapport*]
- .43.1 Reinsurance recoverables in an insurer's balance sheet are the assets at the balance sheet date on account of reinsurance treaties, including commitments, which are in force at that date or which were in force before that date. [*sommes à recouvrer auprès des réassureurs*]
- .44 Report pursuant to law is a report for which the law requires an actuary's opinion. [*rapport en vertu de la loi*]
- .45 Rule means a rule in the Canadian Institute of Actuaries' Rules of Professional Conduct. [*règle*]
- .46 Scenario is a set of consistent assumptions. [*scénario*]
- .47 Service cost is that portion of the present value of a plan's obligations which an actuarial cost method allocates to a time period, excluding any amount for that period in respect of unfunded accrued liabilities. [*cotisation d'exercice*]
- .48 Standard reporting language is standard language for an external user report. [*libellé du rapport type*]
- .49 Subsequent event is an event that of which an actuary first becomes aware ~~of~~ after a calculation date but before the corresponding report date. [*événement subséquent*]

- .50 Use means use by the actuary, usually in the context of use of another person's work. [*utilisation*]
- .51 User means an intended user of the actuary's work. [*utilisateur*]
- .52 Virtually definitive means to become definitive upon completion of one or more actions which are seen as formalities. [*pratiquement définitive*]
- .53 Work means the actuary's work within the domain of actuarial practice and usually includes
 acquisition of knowledge of the circumstances of the case,
 obtaining sufficient and reliable data,
 selection of assumptions and methods,
 calculations and examination of the reasonableness of their result,
 use of other persons' work,
 formulation of opinion and advice,
 reporting, and
documentation. [*travail*]

1500 THE WORK

1510 APPROXIMATION

- .01 *An approximation is appropriate if it reduces the cost of, reduces the time needed for, or improves the actuary's control over, work without affecting the result.*
- .02 *If the actuary reports an appropriate approximation, then the report should avoid unintended reservation.*
- .03 *If the appropriateness of an approximation is doubtful, then the actuary should report its use with reservation. [Effective December 1, 2002]*
- .04 Like materiality, to which it is related, approximation pervades virtually all work and affects the application of nearly all standards. The words “approximation” and “approximate” seldom appear in the standards, but are understood throughout them.
- .05 Approximation permits the actuary to strike a balance between the benefit of precision and the effort of arriving at it.

Approximation in selection of a model

- .06 Reality is complex. A simple model reduces not only the time and expense of work but also the risk of calculation and data error.
- .07 The appropriateness of a simplification depends on the circumstances of the case and the purpose of the work. For example, in selecting a model for advice on funding a pension plan, it may be appropriate to allow for indexing by modifying the assumption for a contingency of which the model takes account, such as the investment return assumption, to arrive at a appropriate composite assumption.

Approximation in the selection of assumptions

- .08 Simplification of an assumption may be an appropriate approximation. For example,
- deaths occur continuously over a year; for simplicity, assume that they all occur at the middle of the year,
- members of a pension plan with early retirement reductions that approximate full actuarial reductions retire at various rates between, say, ages 55 and 65; for simplicity, assume that they all retire at, say, age 62, and
- if the members of a pension plan who die before retirement are entitled to a benefit which is roughly the same as the present value of the retirement benefit; for simplicity, assume that death rates before retirement are equal to zero.

- .09 To make no assumption about a contingency is usually tantamount to assuming a zero rate for that contingency, which is rarely appropriate in itself, but may be appropriate when combined with an adjustment to a related assumption. For example, in some circumstances, the calculation of the liabilities in a benefits plan using an explicit wage and price inflation assumption may be approximated by calculating the liabilities without an explicit wage and price inflation assumption and using a lower liability discount rate assumption representative of the real rate of return.

Approximation by sampling

- .10 A well-chosen sample avoids the extra work of an examination of the entire universe.

Approximations respecting data

- .11 Data may be defective. For example, a benefit plan's records may lack the date of birth of certain members. In some cases there is an appropriate approximation, for example, sampling, or extrapolation from similar situations for which data are available.

Approximation vs. assumption

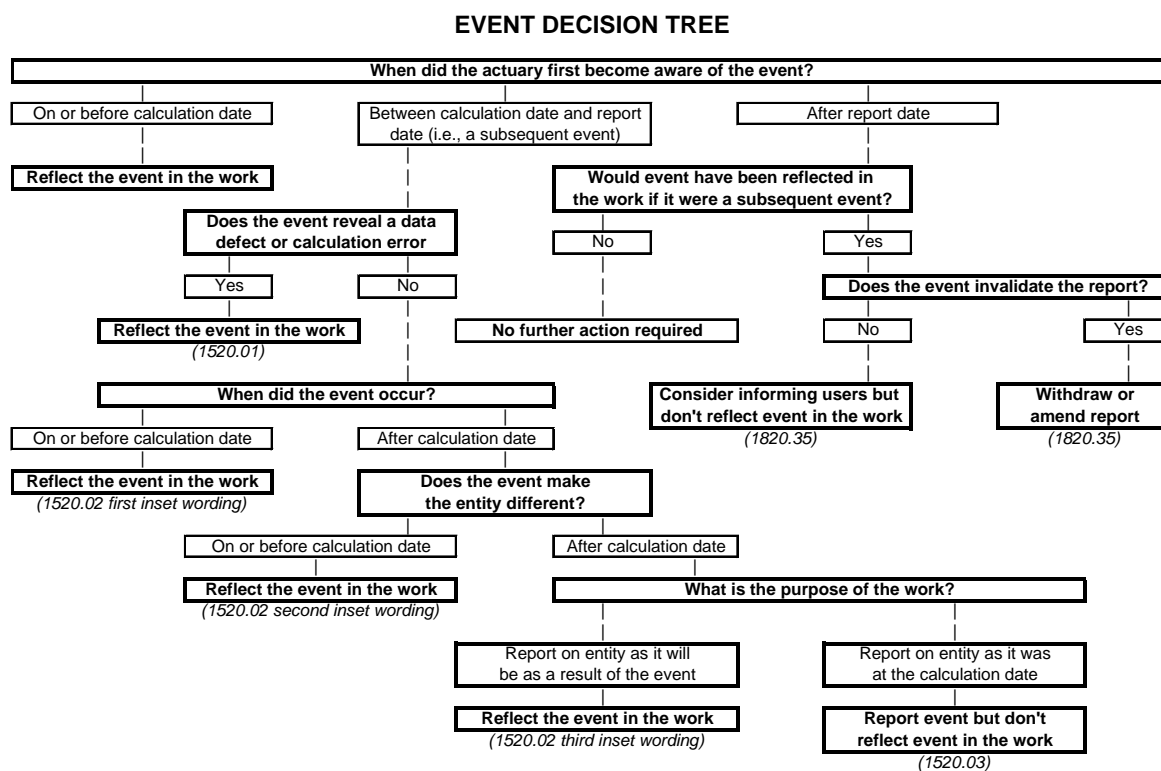
- .12 A criterion of the appropriateness of an approximation is its effect on the result. If the actuary approximates but is unable to assess the resulting error, then the approximation becomes, in effect, an assumption. For example, data are missing and it is not practical to get them. The actuary would consider whether their lack is so important that a report with reservation is necessary but in any case is obliged to make an assumption about them in order to do the work.

Reporting approximations

- .13 To report appropriate approximations in a longer report may provide information useful to users, but such reporting would avoid unintended reservation, as the use of approximations is a usual part of work. The pervasiveness of approximations in work makes their complete reporting impractical.
- .14 If the actuary reports an implicit assumption used as an approximation, then he or she would also report the corresponding explicit assumption or assumptions. Similarly, if an actuary reports approximations for two offsetting assumptions that result in the same net effect as the underlying explicit assumptions, the actuary would also report the explicit assumptions.
- .15 The actuary would not usually use an approximation whose appropriateness is doubtful. That may be unavoidable, however, if data are insufficient or unreliable or if needed resources are lacking. If the engagement is an appropriate engagement, then the actuary would report with reservation the use of the approximation, so that a user is aware of a limitation to the actuary's work.

1515 EVENT

- .01 The following decision tree may assist an actuary in deciding how to reflect an event in the work, if the actuary determines that the event makes the entity different.



1520 SUBSEQUENT EVENTS

- .01 *The actuary should correct any data defect or calculation error that is revealed by a subsequent event reveals.*
- .02 *For work with respect to an entity, the actuary should take a subsequent event into account (other than in a pro forma calculation) if the subsequent event provides information about the entity as it was at the calculation date, retroactively makes the entity different at the calculation date, or makes the entity different after the calculation date and a purpose of the work is to report on the entity as it will be as a result of the event.*
- .03 *The actuary should not take the subsequent event into account if it makes the entity different after the calculation date and a purpose of the work is to report on the entity as it was at the calculation date. Nevertheless, the actuary should report that subsequent event. [Effective December 1, 2002]*

Classification

- .04 A subsequent event is relevant to the recommendation if it reveals an error, provides information about the entity, or is a decision that makes the entity different.
- .05 The actuary would correct an error revealed by a subsequent event. The actuary would classify each subsequent event other than those which reveal errors and, depending on the classification, the actuary would either
- take that event into account, or
 - report that event, but not take it into account.

Definitive and virtually definitive decisions

- .06 A definitive decision means a final and permanent decision that is not tentative, provisional, or unsettled. It would be evidenced by an amendment to a benefits plan, a collective bargaining agreement, a binding exchange of letters between two contracting parties, a court order, a legislative bill that has been proclaimed, or the like. A virtually definitive decision is one that is virtually certain to become definitive, but that lacks one or more formalities like ratification, due diligence, regulatory approval, third reading, royal assent, or proclamation. However, a decision that still involves discretion at an executive or administrative level is not virtually definitive.

Entity

- .06.1 Examples of entities are
- the pension plan, in the case of an actuary doing a valuation of a pension plan,
 - the block of annuity business, in the case of an actuary calculating the insurance contract liabilities for an insurance company's annuity business,
 - a combination of the pension plan and the member's specific data, in the case of the determination of a member's individual entitlement under a pension plan, and
 - the insurance company, in the case of an actuary valuing the insurance contract liabilities of an insurance company.

Event provides information about entity as it was or retroactively makes entity different

.07 Examples of subsequent events that provides information about an entity as it was at the calculation date are

publication of an experience study that provides information for selection of assumptions,

reporting to an insurer of a claim that was incurred on or before the balance sheet date, and

adoption of a pension plan amendment prior to the calculation date of which the actuary becomes aware after that takes effect prior to the calculation date.

.08 ~~Repealed~~In such a case, the effect of the subsequent event on the work is the same as if it had occurred on or before the calculation date and the actuary would not report the event as a subsequent event. That is, the actuary would report the event only to the extent that the event would have been reported had the event occurred before the calculation date.

.09 Repealed

~~Event retroactively makes entity different~~

.10 Examples of events that retroactively make the entity different at the calculation date are definitive or virtually definitive decisions, made after the calculation date but effective on or before the calculation date, to

wind-up a pension plan, partially or fully,

sell a portion of a participating employer's business and consequently to spin-off the corresponding members from the participating employer's pension plan,

amend the benefits of a pension plan,

transfer a portion of an insurer's policies to another insurer, or

invoke a judicial decision that nullifies or significantly modifies the law affecting insurance claims.

.11 ~~In such a case,~~If an event provides information about the entity as it was at the calculation date or provides information that retroactively makes the entity different at the calculation date, the effect of the subsequent event on the work is the same as if the actuary first became aware of the information it had occurred on or before the calculation date and the actuary would not report the event as a subsequent event. That is, the actuary would report the event only to the extent that the event would have been reported had the actuary first become aware of the information-event occurred before the calculation date.

.12 Repealed

Event makes entity different after

.13 If the subsequent event makes the entity different after the calculation date, then the purpose of the work determines whether or not the actuary takes the event into account.

- .14 If the subsequent event makes the entity different after the calculation date and the purpose of the work is to report on the entity as it will be as a result of the event, then the actuary would take that event into account and would describe it in reporting.
- .15 If the subsequent event makes the entity different after the calculation date and the purpose of the work is to report on the entity as it was at that date, then the actuary would not take that event into account but would report the event since it would affect the entity's future operations and the actuary's subsequent calculations.

Classification not clear

- .16 The classification of a subsequent event may be unclear, at least a priori, although the circumstances of the case and the actuary's engagement may make it clear. The following are examples of such events.

a precipitous fall in the stock market. For financial reporting, one can argue that the stock market crash provides additional information about the entity as it was at the calculation date, because the crash is an indicator of the outlook for common share investments at that date; alternatively, one can argue that the crash makes the entity different only after the calculation date since it creates a new situation. The new situation would be reflected in the financial statements for the subsequent accounting period.

a salary freeze for employees who are members of a pension plan. If the salary freeze is a correction of excessive salaries, then it provides additional information about the entity as it was at the calculation date, because the freeze is an indicator of the outlook for salaries at the calculation date. If the salary freeze deals with a recent problem, then it indicates a change in conditions that makes the entity different after the calculation date. In either case, the actuary would consider the effect of the freeze on the employees' pension benefits. It may be that the freeze will have a lasting effect. Alternatively, it may be that the freeze will be compensated for by higher salaries later on, so that the salary inflation assumption based on historical trends continues to be valid.

default on a bond. If the default was the culmination of a gradual deterioration in its issuer's financial circumstances, most of which had occurred before the calculation date but which was not apparent until revealed by the default, then the default provides additional information about the entity as it was at the calculation date. If the default was precipitated by a catastrophe, then it provides information about a change in conditions that makes the entity different after the calculation date.

insolvency of an insurer's reinsurer. This is similar to default on a bond. If the insolvency was the culmination of a gradual deterioration in the reinsurer's financial circumstances, most of which had occurred before the calculation date but which was not apparent until revealed by the insolvency, then the insolvency provides information about the entity as it was at the calculation date. If the insolvency was precipitated by a catastrophe, then it provides information about a change in conditions that makes the entity different after the calculation date.

.17 Repealed

Reporting

~~.17.1 With respect to the existence of a subsequent event that the actuary deems not to be material, it may be appropriate for the actuary to communicate the existence of such an event to the known user(s) of the actuary's work. For example, if the work is in respect of financial statements, the actuary may inform the auditor of those statements of the existence of a subsequent event even if the actuary determines that the event is not material.~~

.18 Sometimes the actuary may consider it appropriate, or the terms of the work may require the actuary, is practical and useful to report an alternative and opposite calculation; i.e., an alternative calculation that does not ~~so~~ take the subsequent event into account when the main calculation does, or that takes the subsequent event into account when the main calculation does not. For example, in a province for which the calculation date for a pension valuation following marriage breakdown is the date of separation, a subsequent event may be the early retirement of the plan member has elected at some time between the calculation date and the report date ~~to retire with an early retirement penalty~~. The actuary would consider reporting values assuming that this subsequent event had been an established intention at the calculation date, instead of or in addition to retirement scenarios otherwise recommended in the practice-specific standards. In such cases, the actuary would make the same calculations regardless of the purpose of the work but the reporting thereof would depend on the purpose of the work.

1530 DATA

- .01 *If the actuary reports without reservation with respect to data, then the data should be sufficient and reliable for the work. If sufficient and reliable data are unobtainable but the defect in them does not negate the usefulness of the result, then the actuary should report a usual opinion with reservation in respect of data. If defects in the obtainable data preclude a useful result, then the actuary should so report or make no report.* [Effective December 1, 2002]
- .02 The work with respect to data consists of
- identifying the data needed,
 - attempting to obtain them,
 - reviewing the data obtained, and
 - assessing sufficiency and reliability of the data obtained.
- .03 If the actuary intends not to take responsibility for data, then the actuary would so report and would report any evident shortcomings in those data.
- .04 The following are examples of the usual practice.
- For a calculation of a pension value in a marriage breakdown, the actuary usually does not take responsibility for data, such as the demographics of the pensioner and the terms of the pension plan. The actuary would usually accept the data supplied by counsel and repeat it in reporting.
- For advice in funding a pension plan, the actuary usually does not take responsibility for participant data and usually accepts, without taking responsibility for, the plan's financial statements and its investment data.
- For calculating the policy liabilities of an insurer, the actuary usually takes responsibility for all data.
- .05 If the data, while usable, are not sufficient and reliable and the actuary's efforts to make them so are unsuccessful, the actuary would not take responsibility for the data and would report with reservation, even when it is usual to take responsibility for them.
- Sufficiency and reliability**
- .06 Data are sufficient if they include the needed information for the work. For example, participants' dates of birth are needed to value the liabilities of a pension plan. Data are reliable if that information is accurate.
- .07 The actuary would usually take responsibility for the sufficiency of the data. Whether the actuary takes responsibility for the reliability of the data depends on the engagement.

- .08 If the ideal data are unobtainable at reasonable cost within the available time, then the actuary would consider what, if any, alternative data are sufficient and reliable.
- .09 Work usually is both data-dependent, meaning that the quality of the result depends on the sufficiency and reliability of the data, and data-intensive, meaning that the data are both voluminous and detailed.

Obtaining data

- .10 Usually, the actuary has neither custody of, nor control over, the data and uses data supplied by other persons. Usually, therefore, after identifying the needed data and attempting to obtain them, the actuary's task is not data creation but data validation, either personally or by using the work of other persons.

Reviewing data

- .11 Items to consider in reviewing data are
- the procedures for, the controls over, and the qualifications of the persons responsible for, their preparation and maintenance,
 - their internal consistency, their consistency with comparable prior period data, and their consistency with external comparable data, such as other files with common elements,
 - their consistency with the governing plan documents and policy forms, and
 - the availability of independent confirmation.
- .12 If the user is able to validate the data, then the actuary may avoid validation by reporting the data. For example, in the case of an actuarial evidence report on the valuation of a disabled person's lost income, the reported data may be either agreed by the parties to the litigation or proved in court. Such avoidance of data validation is usually not practical when the work is data-intensive or has multiple users.

Assessing sufficiency and reliability of data

- .13 The actuary who takes responsibility for the data would classify them as one of the following.
- Sufficient and reliable, in which case the actuary reports an opinion without reservation on data. That does not imply that the data are perfect. Data are rarely perfect; especially when they are voluminous or complex.
 - Defective, but not so as to negate the usefulness of the result, in which case the actuary reports a usual opinion with reservation which describes the defect, describes the work done and assumptions made to cope with the defect, and, if practical, quantifies the effect of the defect on the result.

So defective as to preclude a useful result, in which case the actuary so reports or makes no report. If a report is useful or legally required, then the actuary would describe the defect, describe the work done and assumptions made to cope with the defect, quantify a result if practical, and explain that an opinion is not given because it is not possible to estimate the effect of the defect on the result. If a report is neither useful nor legally required, then the actuary would make none.

1540 CONTROL

- .01 *Control procedures that detect errors and decrease the effect of errors should be performed for calculations.* [Effective July 1, 2011]
- .02 A calculation that is data-intensive, that is complex, that involves physically separate steps like manual and data processing steps or parallel data processing steps, or especially, a combination of them, is prone to error which appropriate control procedures may prevent or, failing prevention, detect. Appropriate control procedures also help to meet the need for consistency between the actuary's work and other related work; for example, a uniform cut-off date in the preparation of financial statements.
- .03 Examples of control procedures are procedures to assure that
- all steps in the calculation are co-ordinated,
 - all steps in the calculation have been performed and checked,
 - the actuary's data processing does not corrupt the data supplied to the actuary,
 - established procedures (for example, those for a prior period) are not changed inadvertently, and
 - changes in established procedures are made in an orderly manner.
- .04 Examples of control tools are
- random sampling,
 - spot checks, and
 - audit trails.

1550 REASONABLENESS OF RESULT

- .01 *The actuary should examine the reasonableness of a calculation's result.* [Effective December 1, 2002]
- .02 As a result of defective data, defective computer software, an accumulation of individually biased assumptions, or the like, a calculation, especially a complex one like a valuation or financial forecast, may be prone to error which checking of the calculation's steps does not reveal but which an examination of its result may reveal. Such an examination is therefore useful and prudent.

- .03 The examination would consider simple questions like the following.
- How does the result compare to the corresponding result for a prior period or a similar case, or to a related but independently calculated amount? Comparison of a benchmark may be more meaningful than comparison of the result. Examples of a benchmark are the forecasted number of retirees divided by the forecasted number of active employees, the loss ratio implied by claim liabilities, and the change during the year of the result.
 - How does the result compare to the corresponding result of a rough approximation?
 - Does the result make common sense?

- .04 The answers to such questions may indicate a need for more work.

1560 DOCUMENTATION

- .01 *The actuary should use his or her best efforts to compile and secure the retention of appropriate documentation.*
- .02 *Where a successor actuary takes possession or control of documentation previously in the possession or control of a predecessor actuary, the successor actuary should use his or her best efforts to make such documentation available to the predecessor actuary, upon request by the predecessor actuary, if needed by the predecessor actuary to respond to queries about the related work.*
- .03 *Where a successor actuary or an employer or client, acting on behalf of a successor actuary, requests access to documentation in the possession or control of a predecessor actuary, in order to carry on work, the predecessor actuary should use his or her best efforts to comply with the request. [Effective December 1, 2002]*
- .04 Documentation is an integral part of work that affects the application of nearly all standards.
- .05 Documentation consists of letters of engagement, working papers, meeting notes, memoranda, correspondence, reports, copies or excerpts of company or plan data and documents, and work plans. Appropriate documentation describes the course of the work and the actuary's compliance with accepted actuarial practice.
- .06 Both professional and legal needs may affect the length of time during which documentation is to be retained.
- .07 An actuary who severs connection with a client or employer (for example, an actuary who retires or changes job) may seek to secure the retention of documentation of work for that client or employer by entrusting it to another actuary, who may be the successor actuary. Said other actuary would use his or her best efforts to make the documentation available to the predecessor actuary if his or her work is questioned or challenged.
- .08 In some circumstances, documentation may not be in the possession or control of an actuary, or an actuary may be unable to release the documentation, particularly in cases involving the proprietary interests of a third party (including a client or employer). In the face of such difficulties, the actuary would consider seeking further advice.

1800 REPORTING

1810 STANDARD REPORTING LANGUAGE

- .01 *The actuary's external user report should incorporate any standard reporting language applicable to the work. [Effective December 1, 2002]*
- .02 The practice-specific standards for work describe any applicable standard reporting language.
- .03 The purpose of standard reporting language is to simplify the actuary's communication with users by creating a clear, easy to recognize, distinction between the usual situation and the unusual (sometimes problem) situation. The standard reporting language, while abbreviated, acquires precision by the convention that the situation is usual if there is no reservation. Any reservation is disclosed in a special paragraph and described either there or by reference. Standard reporting language is thus similar to the auditor's standard report on financial statements.
- .04 The standard reporting language may comprise a complete report; for example, an appointed actuary's report with respect to the financial statements of an insurer. Alternatively, it may be included in a larger report; for example, a report giving advice on funding a pension plan.
- .05 Here is the skeletal structure of standard reporting language.

Addressee, which usually identifies the client or employer.

Scope paragraph, which describes the work and its purpose and says that the work was done in accordance with accepted actuarial practice in Canada in a usual situation, or that it was done in accordance with accepted actuarial practice in Canada "except as described in the following paragraph" in an unusual situation.

Reservations paragraph (omitted in the usual situation), which either compares the particular (unusual) situation to the usual situation or refers to that comparison elsewhere.

Opinion paragraph, which reports the actuary's opinion, without reservation in a usual situation and with reference to the reservations paragraph in an unusual situation. The opinion paragraph either reports the result of the work, which is practical only if the result is short, or references its location.

Identification of the actuary.

Report date.

1820 REPORTING: EXTERNAL USER REPORT

- .01 *In an external user report, the actuary should*
- identify the client or employer,*
 - describe the work, its purpose, and its users,*
 - say whether or not the work is in accordance with accepted actuarial practice in Canada and, if not, disclose the deviation from that practice,*
 - if useful, disclose any unusual application of accepted actuarial practice,*
 - disclose any aspect of the work for which the actuary does not take responsibility,*
 - disclose any assumption that is different from assumption of continuance of the status quo and, if practical, useful and appropriate under the terms of the engagement, disclose the effect of alternative assumptions,*
 - in the case of a periodic report, disclose any inconsistency between the methods and assumptions of the current and prior reports,*
 - describe any subsequent event that is not taken into account in the work,*
 - disclose any reservation,*
 - express an opinion on the results of the work,*
 - identify himself or herself and sign the report, and*
 - date the report.*
- .02 *Any description or disclosure may be in material referred to in the report and either accompany the report or plausibly be available to users.*
- .03 *Subsequently, the actuary should respond to a user's request for explanation except if that is contrary to the terms of the engagement.*
- .04 *Subsequently, the actuary should withdraw or amend the report if information comes to hand after the report date that invalidates the report.*
- .05 *A duty of confidentiality in an appropriate engagement supersedes any of the foregoing portions of this recommendation with which it conflicts, but does not supersede an actuary's obligations to the Canadian Institute of Actuaries, pursuant to the bylaws or the Rules of Professional Conduct. [Effective December 1, 2002]*

Description and disclosure in general

- .06 The range of appropriate reports is relatively narrow for external user reports as compared to that for internal user reports. An external user report would be relatively formal and detailed when the actuary does not communicate directly with users or when the interests of an external user and of the actuary's client or employer are not the same.
- .07 Appropriate description and disclosure in a report strike a balance between too little and too much. Too little disclosure deprives the user of needed information. Too much disclosure may exaggerate the importance of minor matters, imply a diminution of the actuary's responsibility for the work, or make the report hard to read.
- .08 The appropriate criterion for description and disclosure is the question, "What qualitative and quantitative information best serves the user's understanding and decision-making?" The question, "What information does the user want?", is an insufficient criterion because the circumstances of a case may make the actuary aware of information needs of which the user is unaware.
- .09 Reporting the sensitivity of the results to variations in assumptions is often useful.
- .10 Disclosure need not necessarily be in the report itself except if its importance so warrants or if it cannot be referenced in material available to users. Disclosure in a short report may place undue emphasis on the information disclosed.
- .11 An unintended reservation misleads the user if it implies either that there was a deviation from accepted actuarial practice or that the actuary does not take full responsibility for the work. The following are examples.

Approximation is a usual part of work. Even a moderately complex calculation may involve many approximations. Disclosure of an appropriate approximation may mislead the user by implying that the actuary's work falls short of accepted actuarial practice.

Use of another person's work is also a usual part of work. If the actuary does not take responsibility for the used work, then disclosure is appropriate. Disclosure if the actuary does take responsibility for the used work may mislead the user.

Deviation from a particular recommendation or other guidance in the standards when the result of doing so is not material is also a usual part of work and its disclosure is undesirable.

The work, its purpose, and its users

- .12 Description of the work usually includes the calculation date and the numerical result. If the work is required by law, then citation of the law is useful.

- .13 The amount of detail depends mainly on the needs of users. A separate report may be desirable for a particular user (usually a regulator) whose desire for detail significantly exceeds that of other users.
- .14 Description of the purpose of the work and its users permits another person to assess its appropriateness to his or her needs and may thereby avoid unintended use of the work.
- .15 The users comprise the addressee(s) of the report, and any others explicitly identified in the report. Where a report has more than one user, the actuary would have regard to the information of value to each user in determining appropriate disclosure.

Accepted actuarial practice

- .16 If the work is in accordance with accepted actuarial practice, then a simple statement to that effect is a powerful statement, and reassuring even to a user with a limited understanding of what accepted actuarial practice is. If the work is not in accordance with accepted actuarial practice, then a statement that it is, except for specified deviations, is a concise description.
- .17 Any deviation from accepted actuarial practice would result from either conflict with law or conflict with the terms of an appropriate engagement.
- .17.1 For work in Canada, the actuary would refer to “accepted actuarial practice in Canada”, or use other language of equivalent meaning and clarity.
- .17.2 For work outside of Canada, the actuary may choose to refer to
 - “accepted actuarial practice in [country]”, if the guidance of a foreign jurisdiction has been applied to the work,
 - “internationally accepted actuarial practice”, if the guidance of the International Actuarial Association has been applied to the work, or
 - “accepted actuarial practice in Canada”, if Canadian guidance has been applied to the work because of the absence of applicable foreign guidance.

Unusual application of accepted actuarial practice

- .18 The actuary would not usually report a deviation from a particular recommendation or other guidance in the standards as a result of an unusual or unforeseen situation.

- .19 If, as is common, accepted actuarial practice for an aspect of the work encompasses a range, then the actuary usually reports the work as being in accordance with accepted actuarial practice without drawing particular attention to his or her selection within the range. Disclosure of the selection, and of the reason for selecting it, is appropriate, however, if it is

specified by law or by the actuary's client or employer,

excluded from the accepted range by an exposure draft or by approved, but not yet effective, new standards,

inconsistent with the corresponding assumption of a prior periodic report,

dependent on a special permissive feature in the law for its acceptability, or

unusual or controversial.

Limitation to actuary's responsibility

- .20 Any diminution of the actuary's responsibility for the work as a result of an engagement whose terms call for a deviation from accepted actuarial practice would be disclosed.

Disclosure of assumptions

- .21 Disclosure of an assumption includes its description, and, if practical, useful and appropriate under the terms of the engagement, quantification of the financial impact of alternative assumptions.

Subsequent event not taken into account in the work

- .22 An example of a subsequent event not taken into account in the work is a non-retroactive increase in the benefits of a pension plan for which the actuary is advising on funding. The actuary would describe the increase, report that it was not taken into account in the current advice on funding but that it will be taken into account in future advice. If useful, the actuary would quantify its effect, for example by reporting the pro forma effect on the recommended funding if the benefit increase were effective immediately before the calculation date.

Reservations

- .23 A report with reservation may be undesirable but is unavoidable in the following examples.

The actuary was obliged to use the work of another person and has doubts about the appropriateness of so doing.

The actuary was obliged to use insufficient or unreliable data.

There was an undue limitation to the scope of the actuary's work. For example, the time, information, or resources contemplated by the terms of the engagement did not materialize.

There is an unresolved conflict of interest. Rule 5 (Conflict of Interest) permits the actuary who has a conflict of interest to perform professional services if stated conditions are met. In reporting with respect to such a case, it is good practice to note the conflict and confirm that the conditions are met. If, as a result of an apparent but not actual conflict, a user might doubt the actuary's objectivity, then it is useful to report why the conflict is not real. There is no conflict of interest, however, merely because a user and the actuary's client or employer have conflicting interests.

- .24 The actuary would report any remedy, underway or expected, to the problem causing the reservation.
- .25 A serious reservation may call for consulting with another actuary or obtaining legal advice.
- .26 Barring explicit disclosure to the contrary in the report, the user is entitled to assume that the work is in accordance with accepted actuarial practice and no reservation is required,
the actuary takes responsibility for all of the work, and
if a periodic report, then the method is the same as that in the prior report and the assumptions are consistent with those in the prior report.

Opinion

- .27 In giving an opinion, the actuary would begin with “In my opinion...” which is a signal that he or she is giving a formal, professional opinion on a matter within the domain of actuarial practice. The actuary would add appropriate qualification when giving an opinion on a matter outside that domain but on which he or she is able to comment. For example,
“The valuation of Mrs. Smith’s life interest in Mr. Smith’s estate, and the residual value, both depend on the future value of the residential property which makes up the bulk of that estate. An assumption about future real estate values for any given property is outside the domain of actuarial practice but, in my opinion, it is reasonable to assume that property values will generally continue to increase over time at the same rate as inflation.”
- .28 It may be better to disclose an assumption selected by the client or mandated by law without giving an opinion on it; for example,
“On your [lawyer-client’s] instruction, I have assumed that the career path of the [injured high school student] is to complete her high school education and then to obtain an undergraduate university degree.”

Identification

- .29 For work in Canada, the actuary would usually identify himself or herself simply as “Fellow, Canadian Institute of Actuaries” (or “FCIA” if users recognize the abbreviation), especially when Fellowship in the CIA is required or expected for the work. To add additional identification, such as

the actuary’s relationship with the client or employer (e.g., “Vice-President and Actuary” or “Consulting Actuary”), or

the actuary’s other professional qualification (e.g., “Fellow of the Casualty Actuarial Society”)

may be appropriate but may create confusion about the actuary’s qualification to sign the report and about the standards governing the work, and may diminish the standing of the Canadian Institute of Actuaries.

Report date

- .30 In reporting an opinion, the actuary would consider all available information up to the report date, including subsequent events if the report date is after the calculation date.
- .31 The report date would usually be the date at which the actuary has substantially completed the work. The remaining effort may include peer review, typing and photocopying the report, and compilation of documentation.
- .32 The date the actuary signs and delivers the report would be as soon thereafter as practical. If there is an unavoidably long delay, however, then the actuary would consider any additional subsequent events which would result from a current report date.

Withdrawal or amendment of a report

- .33 After the report date, the actuary has no obligation to seek additional information which, if known at the report date, would have been reflected in the work ~~affected the report~~, but, if additional information comes to hand, the actuary would consider if it affects the report. Additional information affects the report if it
- reveals a data defect or a calculation error,
 - provides additional information about the entity which is the subject of the report as that entity was at the calculation date,
 - retroactively makes that entity a different entity at the calculation date, or
 - makes that entity a different entity after the calculation date and a purpose of the work was to report on the entity as it would be as a result of the information.

- .34 That additional information consists of both external information and internal discovery of an error in the work. Its classification is similar to the classification of subsequent events. That is, if the additional information were a subsequent event, and if it would have to be taken into account in the data, methods, or assumptions for the work, then it would affect the report. It does not affect the report if it makes the entity, which is the subject of the report, ~~a different entity~~ after the calculation date and a purpose of the work is to report on the entity as it was at the calculation date; for example, if the additional information changes the outlook for the entity which would lead the actuary to select different assumptions at the next calculation date for a periodic report.
- .35 If the actuary determines that the event affects the report, the actuary would determine whether the event invalidates the report. If the actuary determines that the event does not invalidate the report, then the actuary would consider whether to inform some or all of the users of the report about the event. If the actuary determines that the event invalidates the report, the actuary would withdraw or amend the report. If the actuary withdraws or amends a report, then he or she would seek agreement with the client or employer on the notification to be given to users and on the preparation of an amended or replacement report in cases where there is no legal requirement to do so. Failing such agreement, the actuary would consider seeking legal advice on the discharge of his or her responsibilities, taking consideration of the fact that, to the extent practical and useful, all users should so be informed.
- .35.36 The following examples are intended to assist actuaries in determining whether an event of which the actuary becomes aware after the report date may be worthy of disclosure to the users of the report or may require the report to be withdrawn or amended:
- if an event affects a report, but that report has been superseded by another report, typically no action would be taken with respect to the prior report,
 - if an event materially affects the financial position, financial condition or funded status of a pension plan, but does not materially affect the funding of the plan, it may be sufficient to disclose the event to the users of the report rather than withdraw or amend the report,
 - if an event results in a situation where an assumption used in the work is obviously erroneous, but the assumption was reasonable at the report date, the actuary would typically, not withdraw or amend the report, but would reflect the event in a subsequent report,
 - if an actuary has prepared a report that provides advice on the funding of a pension plan and, subsequent to the report date discovers an error in the report, and the funding recommendations contained in the report would change materially if the error were corrected, the actuary may determine that it is appropriate to withdraw or amend the report.

1830 REPORTING: INTERNAL USER REPORT

- .01 *In the case of an internal user report, the actuary may appropriately abbreviate the recommendation for external user reports. [Effective December 1, 2002]*
- .02 The range of appropriate reports is wider for internal user reports than for external user reports. At one end of the range, a formal internal user report may differ little from an external user report. At the other end of the range, an informal, abbreviated, even oral, report may suffice for an officer with whom the actuary communicates frequently and who is well-versed in the subject of the report. To abbreviate the standards for an internal user report is efficient for both the actuary and the user provided that complete and clear communication is not thereby compromised.

1840 REPORTING: ORAL REPORT

- .01 Oral reporting, especially to an internal user, is both useful and inevitable in some situations. The disadvantage of oral reporting is that the actuary and user may have differing recollections of what was reported. It is therefore good practice to confirm an oral report in writing, especially when there is an external user, or to record it in documentation.
- .02 Except for signature and report date, the standards are the same for both oral and written reports.